Notice of Allowability	Application No.	Applicant(s)	
	10/646,706	SUZUKI ET AL.	
	Examiner	Art Unit	
	Donna V. Lui	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *25 August 2003*.

2. ☒ The allowed claim(s) is/are *1-32*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 8/25/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other *figs 2-7*.

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John Mattingly on January 18, 2006.

In the Drawings:

Figures 2-7 labeled as – "**Prior Art**".

Allowable Subject Matter

2. Claim1-28 are allowed.

3. The following is an examiner's statement of reasons for allowance:

Shindo et al. (Pub. No.: 2004/0196216 A1) teaches a plasma display device comprising a plasma panel and a driving circuit for driving the plasma panel. Shindo teaches the plasma panel being provided with a plurality of discharge cells where each of the plurality of discharge cells comprise at least an X electrode and a Y electrode for producing a display discharge, a dielectric film for covering at least partially the X electrode and the Y electrode, a discharge gas filled in a discharge space, and a phosphor for emitting visible light by being excited by ultraviolet rays produced by the discharge of the discharge gas.

Kang et al. (Pub. No.: 2004/0061669 A1) teaches a maximum of an absolute value of a voltage difference between a X electrode and a Y electrode during a display period when display-discharge pulses are applied to the X electrode and the Y electrode for producing display discharge.

With respect to **Claim 1**, Shindo and Kang fail to teach a display discharge region area ratio Ad that satisfies 0.05 < = Ad < = 0.4, where in the plasma panel, a display surface is a surface from which visible light for display is irradiated, a viewing space is a space into which the visible light for display is irradiated from a display surface, a display space is a space containing a plurality of discharge cells arranged continuously, a display region Rp is a projection of the display space onto a display surface, Sp is an area of the display region Rp, a display discharge space is a portion of a discharge space where a display discharge is produced, a display discharge region is a projection of a display discharge space onto a display surface, Rd denotes a collection of display discharge regions in a display region Rp, Sd is an area of collection Rd, and Ad=Sd/Sp. Both fail to teach that at least some of a plurality of discharge cells, a ratio of an energy of light emitted from a non-display discharge region to an energy of white light is equal to or smaller than 0.2 when the white light is entered into the non-display discharge region from a viewing space, where a cell region is a projection of one of the plurality of discharge cells onto a display surface, and a non-display discharge region is a portion of a cell region other than a display discharge region.

With respect to **Claim 2**, Shindo and Kang fail to teach at least some of a plurality of discharge cells are provided with a black region in which a ratio of an energy of light emitted from a display surface to an energy of white light entered into a display surface is equal to or

smaller than 0.2 when white light is entered into a display surface from a viewing space. Both fail to teach a black region area ratio Ab satisfying the following inequality 0.95 >=Ab >=0.5, where a display space is a space containing a plurality of discharge cells arranged continuously, a display region Rp is a projection of a display space onto a display surface, Sp is an area of a display region Rp, Rb denotes a collection of the black regions in a display region Rp, Sb is an area of the black region collection Rb in the display surface, and Ab=Sb/Sp.

With respect to **Claim 3**, Shindo and Kang fail to teach at least some of a plurality of discharge cells are provided with a black region of reflectance equal to or lower than $0.5x\beta_{max}$, where in the plasma panel, a display surface is a surface from which visible light for display is irradiated, and a viewing space is a space into which the visible light for display is irradiated from a display surface, a reflectance is a ratio of an energy of light emitted from a display surface to an energy of white light entered into a display surface when the white light is entered into a display surface from a viewing space, and β_{max} is a maximum of reflectance in a respective one of a plurality of discharge cells, and where a black region area ratio Ab satisfies the following inequality 0.95 >= Ab >= 0.5, where a display space is a space containing a plurality of discharge cells arranged continuously, a display region Rp is a projection of a display space onto a display surface, Sp is an area of a display region Rp, Rb denotes a collection of the black regions in a display region Rp, Sb is an area of the black region collection Rb in a display surface, and Ab=Sb/Sp.

With respect to **Claim 4**, Shindo and Kang fail to teach an average reflectance β satisfies $0.02 <= \beta <= 0.2$ where in the plasma panel, a display surface is a surface from which visible light for display is irradiated, a viewing space is a space into which the visible light for display is

irradiated from a display surface, a display space is a space containing a plurality of discharge cells arranged continuously, a display region Rp is a projection of a display space onto a display surface, a reflectance is a ratio of an energy of light emitted from a display region Rp to an energy of white light entered into a display region Rp when the white light is entered into a display region Rp from a viewing space, and an average reflectance β is a reflectance averaged over a display region.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna V. Lui whose telephone number is (571) 272-4920. The examiner can normally be reached on Monday through Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

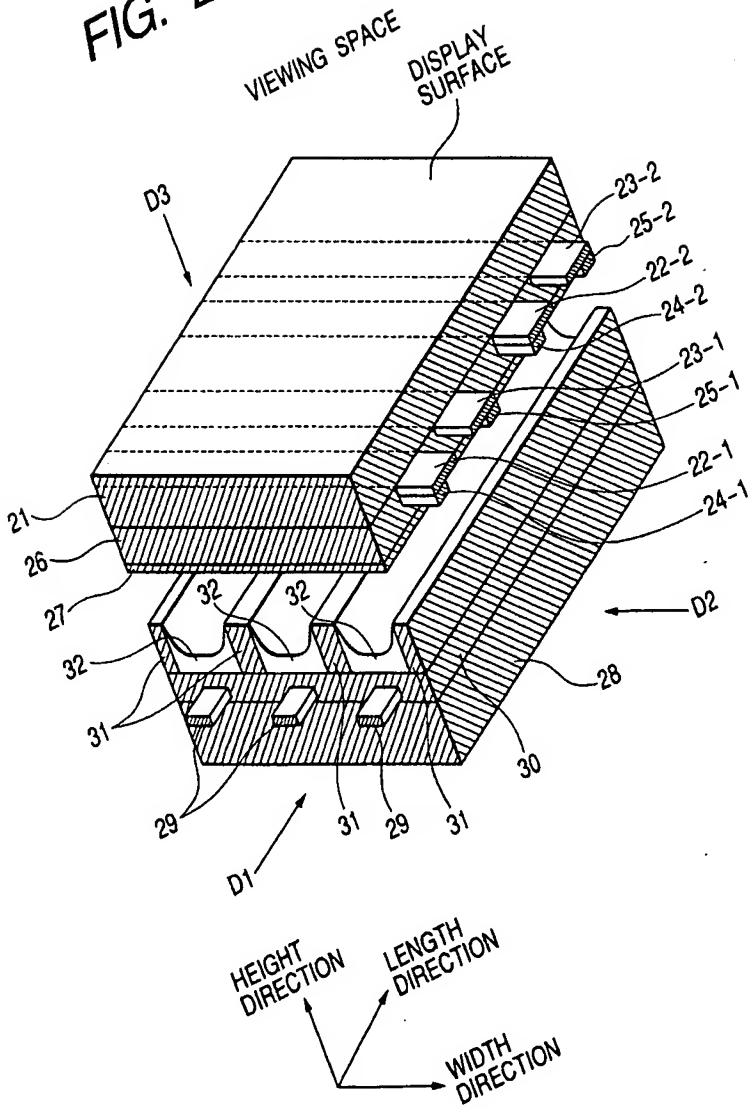
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Donna V Lui
Examiner
Art Unit 2675

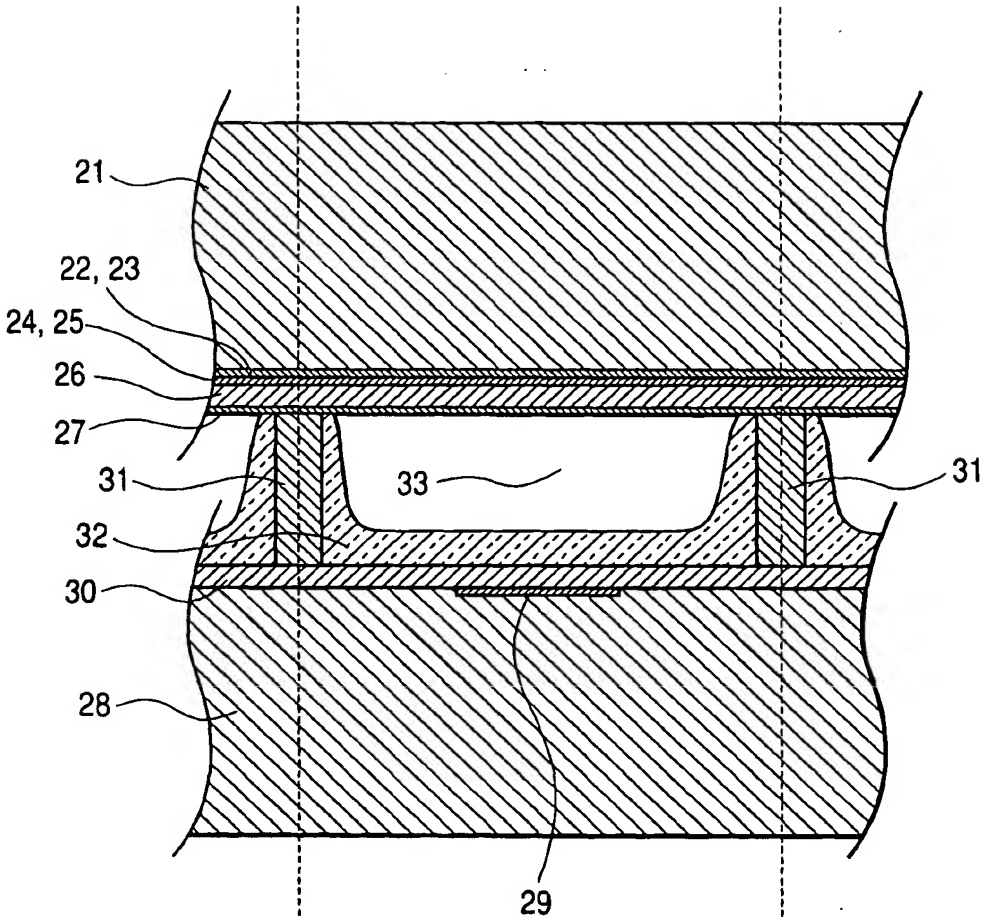
SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER

FIG. 2



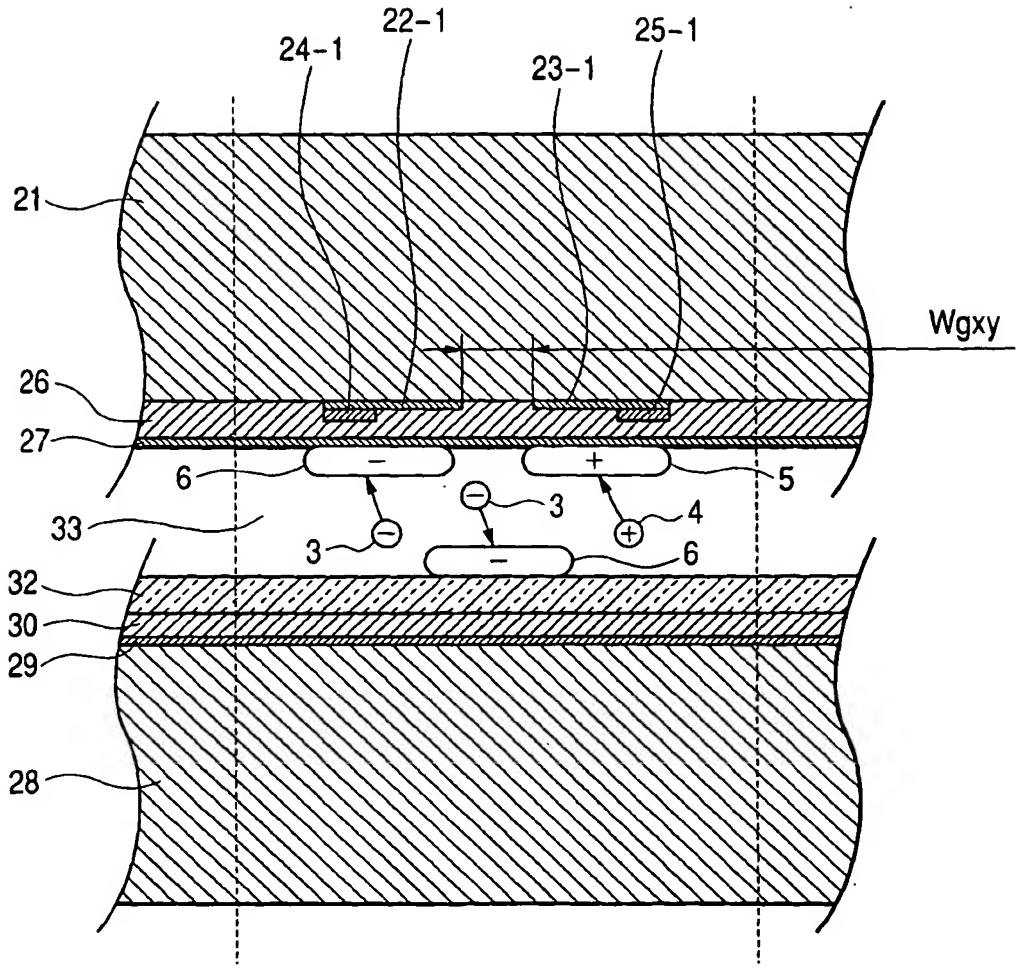
PRIOR ART

FIG. 3



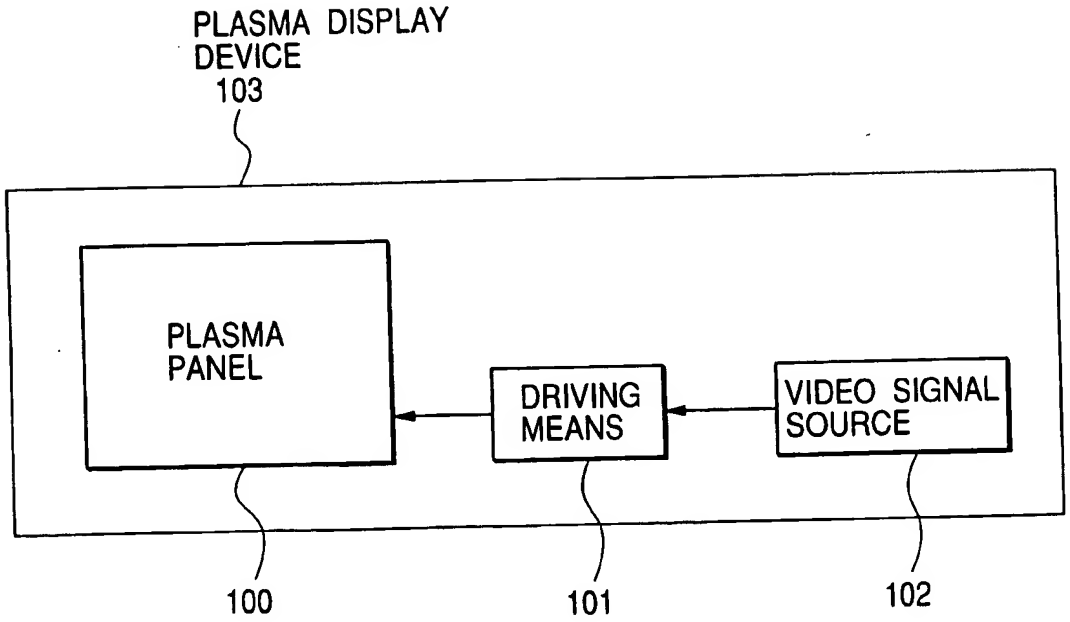
PRIOR ART

FIG. 4



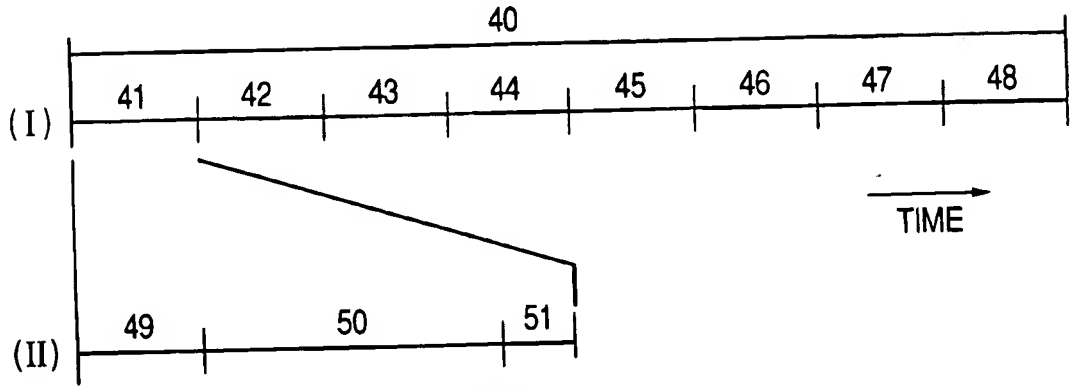
PRIOR ART

FIG. 5



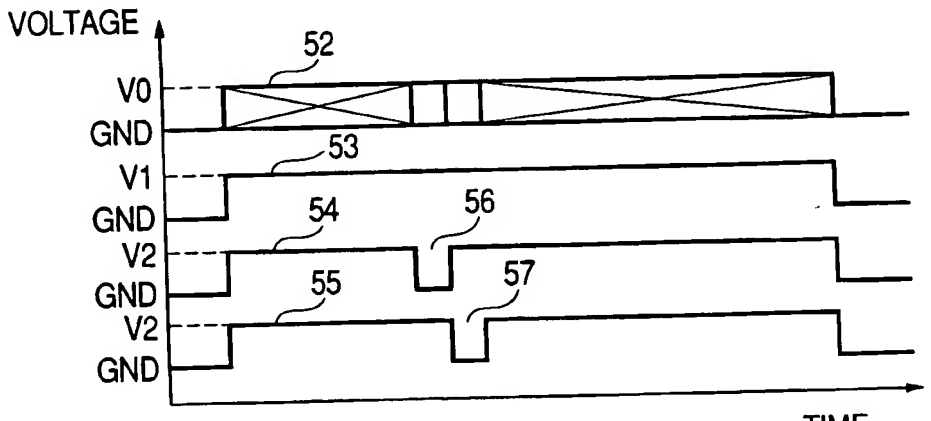
PRIOR ART

FIG. 6A



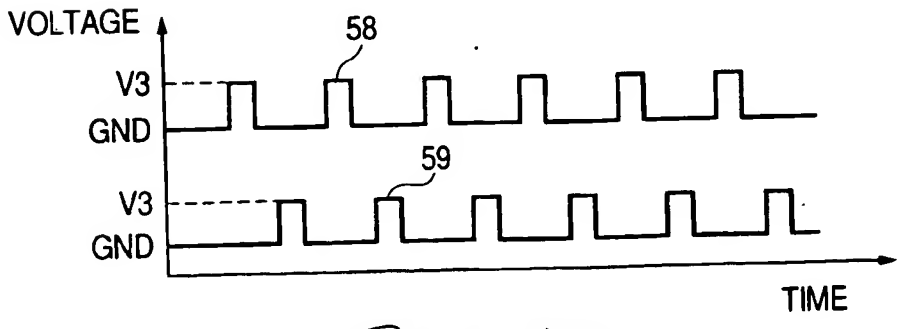
PRIOR ART

FIG. 6B



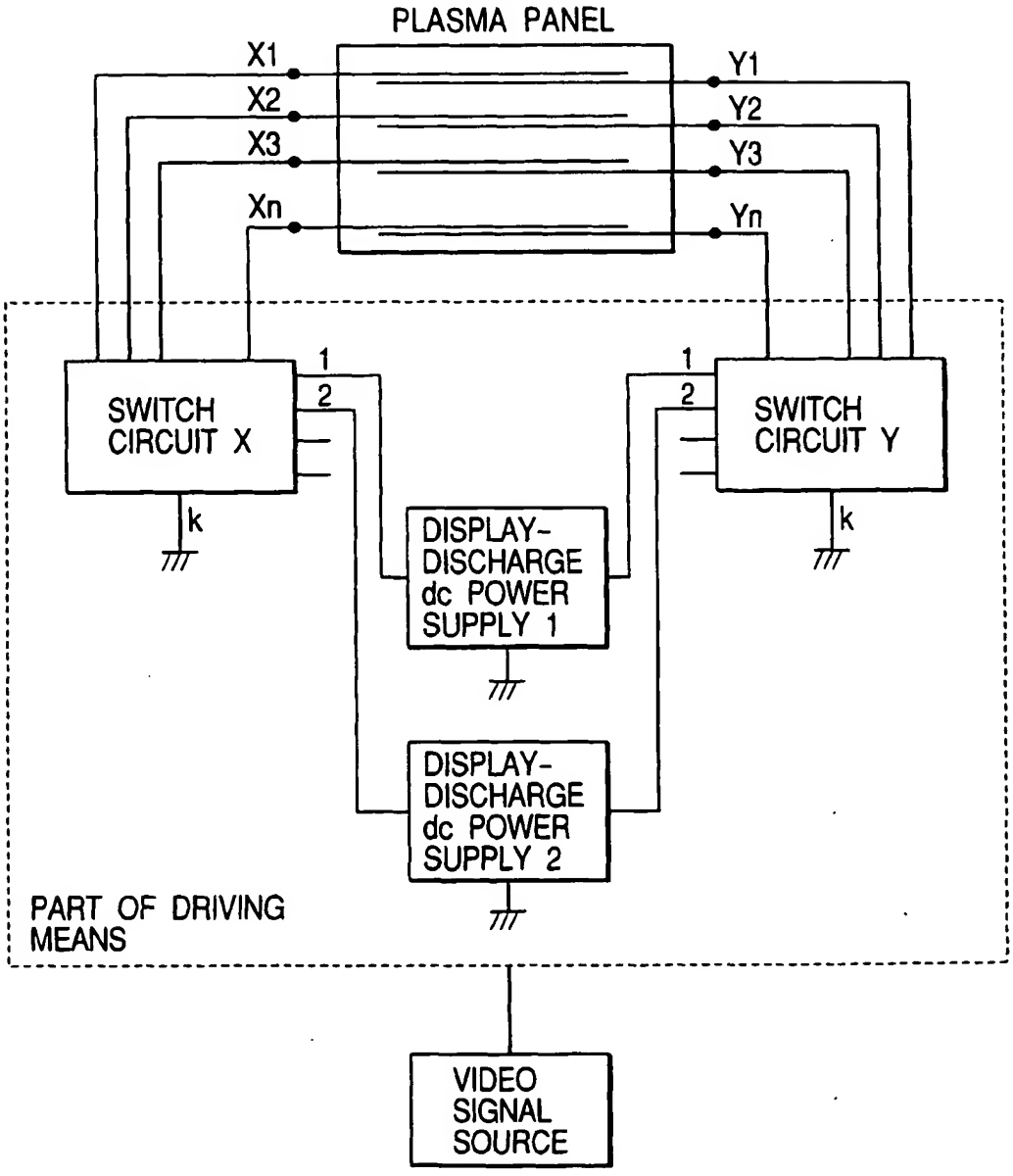
PRIOR ART

FIG. 6C



PRIOR ART

FIG. 7



PRIOR ART